

ECS/EMD Configuration Change Request

Page 1 of

Page(s)

1. Originator Elizabeth O. Ajayi	2. Log Date: 5/5/04	3. CCR #: 04-0248	4. Rev: —	5. Tel: (301) 925-0507	6. Rm #: 3000L	7. Org. Custom Code
8. CCR Title: Release 7 Implementation Earth Science Data Model						
9. Originator Signature/Date Elizabeth O. Ajayi /s/ 5/6/04			10. Class II	11. Type: CCR	12. Need Date: 05/14/2004	
13. CCR Sponsor Signature/Date Janine Smith /s/ 5/6/04			14. Category of Change: Update ECS/EMD Baseline Doc		15. Priority: (If "Emergency" fill in Block 27). Routine	
16. Documentation/Drawings Impacted (Review and submit checklist): 420-EMD-001			17. Schedule Impact: None		18. CI(s) Affected: ESDT, SDSRV, and DDICT	
19. Release Affected by this Change: 7		20. Date due to Customer: N/A		21. Estimated Cost: None - Under 100K		
22. Source Reference: <input checked="" type="checkbox"/> NCR (attach) <input type="checkbox"/> Action Item <input type="checkbox"/> Tech Ref. <input type="checkbox"/> GSFC <input checked="" type="checkbox"/> Other: 36180, 36163, 38394, 38769, 38992, 38569, 39664, 39614, 39835, 37470, 31478, 40203						
23. Problem: (use additional Sheets if necessary) Incorporated all the addendums along with the following valids for GLAS (NCR40203) into the main Data Model Documentation: ECSTermKeyword: "Glaciers/Ice Sheets" ECSVariableKeyword: "Glacier Elevation/Ice Sheet Elevation" (Listing continues on Additional Sheet)						
24. Proposed Solution: (use additional sheets if necessary) Request that DM post the revised 420-EMD-001 on the EDHS server.						
25. Alternate Solution: (use additional sheets if necessary) N/A						
26. Consequences if Change(s) are not approved: (use additional sheets if necessary) The Documentation will be inconsistent with the implementation.						
27. Justification for Emergency (If Block 15 is "Emergency"): N/A						
28. Site(s) Affected: <input checked="" type="checkbox"/> EDF <input type="checkbox"/> PVC <input type="checkbox"/> VATC <input type="checkbox"/> EDC <input type="checkbox"/> GSFC <input type="checkbox"/> LaRC <input type="checkbox"/> NSIDC <input type="checkbox"/> SMC <input type="checkbox"/> AK <input type="checkbox"/> JPL <input type="checkbox"/> EOC <input type="checkbox"/> IDG Test Cell <input type="checkbox"/> Other						
29. Board Comments:			30. Work Assigned To:		31. CCR Closed Date:	
32. SCDV CCB Chair (Sign/Date): Byron V. Peters /s/ 5/6/04			Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS			
33. EDF CCB Chair (Sign/Date):			Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS			
34. ECS CCB Chair (Sign/Date):			Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ESDIS			

ADDITIONAL SHEET

CCR #: 04-0248 **Rev:— Originator:** Elizabeth O. Ajayi

Telephone: 301-925-0507 **Office:** 3000L

Title of Change: Release 7 Implementation Earth Science Data Model.

Newly Submitted ECS Keyword to synchronize ESDT descriptor keywords with ECS Keywords:
NCR36180

New Role
Quality Assessment
Instrument (NCR36163)

New Processing Center
SeaWiFS DPS

New DmDdInstrument Valid
Sea-Viewing Wide Field-of-View Sensor
SeaWiFS

New DmDdSensor Valid
SeaWiFS
Off-axis Rotating Scanning Telescope

New DmDdPlatform Valid
Orbital Sciences Corporation OrbView-2 Satellite
OrbView-2

New DmDdECSVariable Valid
Coccolithophores
Microphytes

New DmDdECSValidMappings
Near Infrared
Aerosol Reflectance
Aerosol Optical Thickness
Diffuse Attenuation Coefficients

Newly Submitted ECS Keyword to synchronize ESDT descriptor keywords with ECS Keywords.

New InstrumentTechnique valid
Correlation Radiometry

New SensorShortName valid
Correlation Radiometer at 2.3 um
Correlation Radiometer at 2.4 um
Correlation Radiometer at 4.7 um

New SensorTechnique valid
Correlation Radiometry

Data Model Documentation changes for AMSR and LP DAAC
NCR38394

New ArchiveCenter
LPDAAC – Land Processing Distributed Active Archive Center

New Processing Center
JAXA – Japan Aerospace Exploration Agency

Data Model Documentation changes for UARS, OCTS, and TRMM valids
NCR38769

Altitude Distance Units
log(hecto Pascals)

ECS Parameter Keyword

Aerosol extinction profiles at 12.1 microns (AERO12P1)
Aerosol extinction profiles at 1257 cm-1 (AERO1257)
Aerosol extinction profiles at 1605 cm-1 (AERO1605)
Aerosol extinction profiles at 1897 cm-1 (AERO1897)
Aerosol extinction profiles at 2.45 microns (AEXTHF)
Aerosol extinction profiles at 2.80 microns (AEXTCO2)
Aerosol extinction profiles at 3.40 microns (AEXTHCL)
Aerosol extinction profiles at 3.46 microns (AEXTCH4)
Aerosol extinction profiles at 5.26 microns (AEXTNO)
Aerosol extinction profiles at 6.23 microns (AERO6P23)
Aerosol extinction profiles at 780 cm-1 (AERO780)
Aerosol extinction profiles at 790 cm-1 (AERO790)
Aerosol extinction profiles at 843 cm-1 (AERO843)
Aerosol extinction profiles at 880 cm-1 (AERO880)
Aerosol extinction profiles at 925 cm-1 (AERO925)
Altitude profiles
Atmospheric pressure profiles
Atmospheric temperature profiles (TEMP)
Atmospheric temperature profiles on a pressure grid (TEMP_P)
Atmospheric temperature profiles on an altitude grid (TEMP_A)
Atmospheric temperature profiles
CFC-11 or trichlorofluoromethane volume mixing ratio profiles (CFCL3)
CFC-12 or dichlorodifluoromethane volume mixing ratio profiles (CF2CL2)
Carbon monoxide volume mixing ratio profiles (CO)
Chlorine monoxide volume mixing ratio profiles (CLO)
Chlorine nitrate volume mixing ratio profiles (CLONO2)
Dinitrogen pentoxide volume mixing ratio profiles (N2O5)
Dinitrogen pentoxide volume mixing ratio profiles (N2O5_OTHER)
Electron differential number flux (intensity) profiles
Electron energy deposition profiles (EDEP3AT_ELEC)
Electron energy deposition profiles from the HEPS instrument (HEPS_ELEC_ED)
Electron energy deposition profiles from the MEPS instrument (MEPS_ELEC_ED)
Geopotential height profiles (GPH)
Geopotential height profiles
Hydrogen chloride volume mixing ratio profiles (HCL)
Hydrogen fluoride volume mixing ratio profiles (HF)
Meridional wind component profiles on a pressure grid (MERWIN_P)
Meridional wind component profiles on an altitude grid (MERWIN_A)
Meridional wind component profiles
Methane volume mixing ratio profiles (CH4)
Methyl cyanide volume mixing ratio profiles (CH3CN)
Nitric acid volume mixing ratio profiles (HNO3)
Nitric oxide volume mixing ratio profiles (NO)
Nitrogen dioxide volume mixing ratio profiles (NO2)
Nitrous oxide volume mixing ratio profiles (N2O)
O2 band volume emission rate profiles on a pressure grid (VOLER_P)
O2 band volume emission rate profiles on an altitude grid (VOLER_A)
Ozone volume mixing ratio profiles (O3)
Ozone volume mixing ratio profiles at 183 GHz (O3_183)
Ozone volume mixing ratio profiles at 205 GHz (O3_205)
Ozone volume mixing ratio profiles at 780 cm-1 (O3B9)
Proton energy deposition profiles (EDEP3AT_PROT)
Proton energy deposition profiles from the HEPS instrument (HEPS_PROT_ED)
Proton energy deposition profiles from the MEPS instrument (MEPS_PROT_ED)
Relative humidity (moisture) profiles
Sulfur dioxide volume mixing ratio profiles (SO2)
Upper tropospheric relative humidity with respect to ice profiles (UTH)
Vertical velocity (omega) profiles
Water vapor volume mixing ratio profiles (H2O)
X-ray energy deposition profiles (EDEP3AT_P[01-16])
Zonal wind component profiles on a pressure grid (ZONWIN_P)

Zonal wind component profiles on an altitude grid (ZONWIN_A)
Zonal wind component profiles
Aerosol Optical Thickness
Aerosol Reflectance
Angstrom coefficient, 520 to 865 nm
Chlorophyll a concentration
Diffuse Attenuation Coefficients
Epsilon of aerosol correction at 670 and 865 nm
Integral chlorophyll, calculated using the Level-2 values chlorophyll a divided by K_490
Near Infrared
Nitric acid volume mixing ratio profiles (HNO3)
Normalized water-leaving radiance at 490 nm
Normalized water-leaving radiance at 520 nm
Normalized water-leaving radiance at 565 nm
Normalized water-leaving radiance at 670 nm
Radiance @ 0.63um
Radiance @ 1.6um
Radiance @ 10.8um
Radiance @ 12.0um
Radiance @ 3.75um
Satellite Local Zenith Angle
Conditional Rain Rate
Rain Probability
 $2.0 * TB(19V) - TB(21V)$
Latent Heat

ECS Term Keyword
Ionosphere/Magnetosphere Particles

ECS Variable Keyword
Airglow
Altitude
Hydrogen Fluoride
Methyl Cyanide
Nitric Oxide
Temperature Profiles
Microwave Radiance

Geographic Coordinate Units
kilometers

Instrument Long Name
Cryogenic Limb Array Etalon Spectrometer
HALogen Occultation Experiment
High Resolution Doppler Imager
Improved Stratospheric And Mesospheric Sounder
Particle Environment Monitor Atmospheric X-ray Imaging Spectrometer
Particle Environment Monitor High-Energy Particle Spectrometer
Particle Environment Monitor Medium-Energy Particle Spectrometer
Solar Ultraviolet Spectral Irradiance Monitor
WIND Imaging Interferometer
Ocean Color and Temperature Sensor
Precipitation Radar
TRMM Microwave Imager
Visible and InfraRed Scanner

Instrument Short Name
CLAES
HALOE
HRDI
ISAMS
PEM AXIS
PEM HEPS
PEM MEPS
SUSIM
WINDII
OCTS
PR
TMI

VIRS

Platform Long Name
Upper Atmosphere Research Satellite
Advanced Earth Observing Satellite

Platform Short Name
UARS
ADEOS

Processing Center
CDHF - Central Data Handling Facility
TSDIS - TRMM Science Data and Information System

Processing Level ID
1C

Sensor Long Name
Precipitation Radar
TRMM Microwave Imager
Visible and InfraRed Scanner

Sensor Short Name
OCTS
PR
TMI
VIRS

Data Model Documentation changes for OMI valid.
NCR38992

ECS Variable Keyword
Formaldehyde

Data Model Documentation changes for TOMS/Nimbus-7 valids.
NCR38569

Platform Long Name
Nimbus-7

Platform Short Name
Nimbus-7

Instrument Long Name
Total Ozone Mapping Spectrometer

Instrument Short Name
TOMS

Sensor Long Name
Cross-track Scanning Monochromator

Sensor Short Name
Scanner

Data Model Documentation changes for DAS and MODIS valids.
NCR39664

ECS Variable Keyword
Incoming Solar Radiation

Processing Center
NCCS – NASA Center for Computational Sciences

NCR39614
ECS Term Keyword

Data Model Documentation changes for ASTER valid.
NCR39835

Processing Center
GDS – Ground Data System

Data Model Documentation changes for dataset disclaimer attributes.
NCR37470

NCR37470

The following corrections need to be made:

1) Within the Conceptual Data Model Diagram on pages 2-3 and 2-4:

- a) "DatasetDisclaimer" within the ECSCollection class should read "DatasetDisclaimerPointer VA200"
- b) "ECSCollectionGuidePointerComment VA255" should be added to the ECSCollectionGuide class
- c) The datatype of "ECSCollectionGuidePointer" within the ECSCollectionGuide class should be "VA200"
- d) The MiscellaneousInformationURL4 class should be renamed to MiscellaneousInformation and should be connected to the ECSCollection class with a zero or one to one relationship
- e) "MiscellaneousInformationURLPointer" within the MiscellaneousInformationURL4 class should read "MiscellaneousInformationPointer"
- f) "MiscellaneousInformationURLComment" within the MiscellaneousInformationURL4 class should read "MiscellaneousInformationPointerComment"

2) Within Figure 2-4. ECSCollection on page 2-7:

- a) The datatype of "DatasetDisclaimerPointer" within the ECSCollection class should be "VA200"
- b) The MiscellaneousInformation class, containing the MiscellaneousInformationPointer and MiscellaneousInformationPointerComment attributes, should be added and connected to the ECSCollection class with a zero or one to one relationship.
- c) The ECSCollectionGuide class, containing the ECSCollectionGuidePointer and ECSCollectionGuidePointerComment attributes, should be added and connected to the ECSCollection class with a zero or one to one relationship.

3) Within Figure 2-10. Document on page 2-13:

- a) "ECSCollectionGuidePointerComment VA255" should be added to the ECSCollectionGuide class
- b) The datatype of "ECSCollectionGuidePointer" within the ECSCollectionGuide class should be "VA200"

4) For the ECSCollectionGuide class on page 2-31:

- a) "ECSCollectionGuidePointerComment" should be added to the Attribute List

5) For Table 2-3. Attribute Reference on pages 2-73 through 2-80:

- a) The datatype for "DatasetDisclaimerPointer" should be "VA200"
- b) "ECSCollectionGuidePointerComment" with a datatype of "VA255" should be added
- c) "MiscellaneousInformationURLCommentPointer" should be renamed to "MiscellaneousInformationPointerComment"
- d) "MiscellaneousInformationURLPointer" should be renamed to "MiscellaneousInformationPointer"

6) For the attribute descriptions that start on page 2-80:

- a) The "ECSCollectionGuidePointerComment" attribute should be added to page 2-131 with a Description of "This attribute is used to provide the text displayed on the client for the ECSCollectionGuidePointer." and an Annotation and Reference List which match those of the "ECSCollectionGuidePointer" attribute
- b) The "MiscellaneousInformationCommentPointer" attribute should be renamed to "MiscellaneousInformationPointerComment"

Updates for AMSR EquatorCrossing usage
NCR31478

EquatorCrossingDate - This attribute represents the date of the descending equator crossing. The AMSR data products will also use this attribute to represent the date of the ascending equator crossing, as appropriate.

EquatorCrossingLongitude - This attribute represents the terrestrial longitude of the descending equator crossing. The AMSR data products will also use this attribute to represent the terrestrial longitude of the ascending equator crossing, as appropriate.

EquatorCrossingTime - This attribute represents the time of the descending equator crossing. The AMSR data products will also use this attribute to represent the time of the ascending equator crossing, as appropriate.

Additional Modifications from the Science Office

The following attributes and classes are missing from the document:

DAP/DAPID
DAP/DAPInsertDate
AP/APCollectionShortName
AP/APCollectionVersionID
PGEGroups
AssociatedCollections

Provide datatypes for the following attributes in the Conceptual Diagrams:

AncillaryInputType
BrowseSize
BrowseDescription
ReprocessingActual
ReprocessingPlanned
DayNightFlag
EquatorCrossingLongitude
OrbitatModelName
ParameterValue
AutomaticQualityFlag
OperationalQualityFlag
ScienceQualityFlagExplanation
ScienceQualityFlag
OperationalQualityFlagExplanation
AutomaticQualityFlagExplanation
ProcessingQADescription
ProcessingQAAttribute
Role
ContactInstructions
StreetAddress
City
StateProvince
PostalCode
Country
TelephoneNumberType
ElectronicMailAddress
ContactOrganizationName
ContactFirstName
ContactMiddleName
ContactLastName
ContactJobPosition
AlgorithmPackageMaturityCode
DeliveryPurpose
PGENAME
PGEFunction

Change the datatypes of the following attributes to VA80:

ECSDisciplineKeyword

ECSTermKeyword

ECSTopicKeyword

Change the datatype of ParameterValue from VA10 to VA255.